

REMARKS

Applicants request favorable reconsideration and allowance of the subject application in view of the preceding amendments and the following remarks.

Applicants submit herewith a new abstract to place the application in better form. No new matter has been added by this change.

Claims 1-11 are presented for consideration. Claim 1 is the sole independent claim. Claims 12-15 have been canceled without prejudice or disclaimer. Applicants reserve the right to file a divisional application directed to the subject matter of these claims. Claims 1-3 and 5-11 have been amended to clarify features of the invention. Support for these changes can be found in the original application, as filed. Therefore, no new matter has been added.

Applicants request favorable reconsideration and withdrawal of the objection and rejections set forth in the above-noted Office Action.

The Examiner objected to the Amendment filed on October 17, 2002, on the grounds that the Amendment introduced new matter into the disclosure. Claims 1-11 were rejected under 35 U.S.C. § 112, first paragraph, on the grounds that these claims were not adequately described in the subject disclosure. Claims 1-11 also were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite. With regards to this object and these rejections, the Examiner objected to the prior recitation of the function of the first pressure control device. These contentions are respectfully traversed. Nevertheless, Applicants have amended independent claim 1 in light of the Examiner's comments. Applicants submit that support for the features now recited can be found in the original disclosure at least on page 10, lines 15-24, on page 13, lines 12-18, page 22,

lines 24-25 and on page 23, line 1-6. Applicants submit, therefore, that the foregoing objection and rejections have been overcome. Such favorable indication is requested.

Turning now to the art rejections, claims 1-7, 10 and 11 have been rejected under 35 U.S.C. § 103 as being unpatentable over U.S. Patent No. 6,266,133 to Osakabe in view of U.S. Patent No. 5,559,584 to Miyaji et al. Claims 8 and 9 were rejected under 35 U.S.C. § 103 based on that art combination and further in view of Japanese patent document number 5-210049 to Aoki (claim 8) or U.S. Patent No. 6,356,338 to Arakawa (claim 9). Applicants submit that the cited art, whether taken individually or in combination, does not teach many features of the present invention as previously recited in claims 1-11. Therefore, these rejections are respectfully traversed. Nevertheless, Applicants submit that independent claim 1, as presented, amplifies the distinctions between the present invention and the cited art.

Independent claim 1 recites an exposure apparatus having an illuminating optics unit for irradiating a reticle, on which a predetermined pattern has been formed, with exposing light emitted from an exposure light source, a reticle stage on which the reticle is placed, a projection optics unit for projecting the predetermined pattern of a reticle onto a substrate, and a substrate stage on which the substrate is placed. The apparatus includes at least one chamber for internally accommodating the illuminating optics unit, the reticle stage, the projection optics unit and the substrate stage, first pressure control means for making a value of pressure inside the at least one chamber higher than a value of pressure outside the at least one chamber, and first correction means. The first correction means corrects optical characteristics of the projection optics unit by performing at least one of (i) moving an adjustment unit for adjusting the optical characteristics

of the projection optics unit and (ii) shifting a wavelength of the exposing light, in accordance with the value of the pressure inside the at least one chamber.

Applicants submit that the cited art does not teach or suggest such features of the present invention, as recited in independent claim 1.

The Osakabe patent shows a device for transporting an apparatus safely, without being dependent on a change in environmental conditions, such as temperature or pressure, for example, at the time of transportation. An apparatus such as an exposure apparatus can be disposed inside an enclosure. Then, a pressure absorber adjusts the differential pressure inside and outside of the enclosure, in order to maintain a gas-tight environment formed inside the enclosure. Applicants submit, however, that the Osakabe patent does not teach or suggest a unit for correcting optical characteristics of a projection optics unit, and does not teach or suggest performing such a correction in the manner of the present invention recited in independent claim 1. Rather, the Osakabe patent does not teach or suggest correcting the optical characteristics of the projection optics in accordance with a value of pressure inside the chamber. Accordingly, Applicants submit that the Osakabe patent does not teach or suggest many features of the present invention as recited in independent claim 1.

Applicants further submit that the remaining art cited does not cure the deficiencies noted above with respect to the Osakabe patent.

The Miyaji et al. patent discloses an exposure apparatus that controls inert pressure of a projection optical system. In that apparatus, pressure inside a projection optical system is set to be above atmospheric pressure for the purpose of preventing contamination. See column 6, lines

54-56, in that patent. Applicants submit, however, that the Miyaji et al. patent, as with the Osakabe patent, does not teach or suggest a unit for correcting optical characteristics of a projection optics unit in the manner of the present invention recited in independent claim 1. Specifically, that patent likewise does not teach or suggest correcting the optical characteristics of a projection optics unit in accordance with a value of pressure inside a chamber, in the manner of the present invention.

The remaining art cited likewise does not teach or suggest such features of the present invention.

The Aoki document teaches a device for correcting properties of projection optical lenses in accordance with a control pressure inside the projection optical lenses. Specifically, a mixed gas, which consists of two or more kinds of gases, is provided into the projection optical lenses in order to correct the magnification thereof. The Arakawa patent discloses a subsystem for exhausting a gas-like chemical substance in a section in which an exposure apparatus and a coating/developing system connect.

Applicants submit, however, that neither the Aoki document nor the Arakawa patent teaches or suggests the salient features of Applicants' present invention, as recited in independent claim 1, which have been discussed above. Specifically, those citations teach nothing regarding correcting optical characteristics of a projection optics unit in the manner of the present invention. Therefore, those citations add nothing to the teachings of the Osakabe or Miyaji et al. patents that would render obvious Applicants' present invention recited in independent claim 1.

For the reasons noted above, Applicants submit that the present invention, as recited in independent claim 1, is patentably defined over the cited art.


Dependent claims 2-11 also should be deemed allowable, in their own right, for defining other patentable features of the present invention in addition to those recited in independent claim 1. Further individual consideration of these dependent claims is requested.

Applicants further submit that this Amendment After Final Rejection clearly places this application in condition for allowance. This Amendment was not earlier presented because Applicants believed that the prior Amendment placed the application in condition for allowance. Accordingly, entry of the instant Amendment, as an earnest attempt to advance prosecution and reduce the number of issues, is requested under 37 CFR 1.116.

Favorable reconsideration, withdrawal of the objection and rejections set forth in the above-noted Office Action and an early Notice of Allowance are also requested.

Applicants' undersigned attorney may be reached in our Washington, D.C. office by telephone at (202) 530-1010. All correspondence should be directed to our address listed below.

Respectfully submitted,



Attorney for Applicants

Steven E. Warner

Registration No. 33,326

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200
SEW/eab